

Combination Heating/Cooling Units

INDEX

MODEL	VOLTS/PH	LABEL DIAGRAM	
		Fig.	Dwg No.
48DL,DM006300 48DL,DM006310	230/1	1	48DL504344
48DL,DM006400 48DL,DM006410	208/3	2	48DL504354
48DL,DM006500 48DL,DM006510	230/3		
48DL,DM006600 48DL,DM006610	460/3		

NOTES

1. Fan motors are thermally protected.
2. Terminations in low-voltage connection box suitable for connection of NEC Class 2 control circuit wiring at 24 volts.
3. Wire units in accordance with local codes
4. When original factory wiring must be replaced, use the same type of wire or equivalent
5. Use copper or copper-clad conductors only

CONTROL CENTERS*

No. 1	No. 2	No. 3
HH07AT074 Thermostat and HH93AZ076† Subbase	HH01AD042 Thermostat and HH93AZ042 Subbase	HH01AD040 Thermostat and HH93AZ040 Subbase

*Control Centers shown on Label Diagrams

†Automatic Changeover Subbase

HH93AZ080 is suitable for use if manual changeover is desired

LEGEND

C	— Contactor
CC	— Cooling Compensator
Compr	— Compressor
GV	— Gas Valve
HA	— Heat Anticipator
IC	— Ignition Control
IFM	— Indoor Fan Motor
IFMC	— Indoor Fan Motor Capacitor
IFR	— Indoor Fan Relay
LS	— Limit Switch
OFM	— Outdoor Fan Motor
OFMC	— Outdoor Fan Motor Capacitor
QT	— Quad Terminal
RC	— Run Capacitor
RS	— Roll-Out Switch
SC	— Start Capacitor
SR	— Start Relay
TC	— Thermostat Cooling
TDR	— Time Delay Relay
TH	— Thermostat Heating
Trans	— Transformer
	To indicate common potential only, not to represent wire
	Field Power Wires
	Field Control Wires
	Field Ground Wires
	Field Splice
	Junction
	Component Connections (marked)
	Component Connections (unmarked)
	Thermostat Connections

INITIAL START-UP SEQUENCE

Start-Up Sequence, Natural and LP Gas Units With Intermittent Spark Ignition of Pilot, indoor (evaporator) fan motor time delay relay and Essex SX242 gas valve. (See Caution above)

MANUAL SEQUENCE

1. With power off turn manual gas valve knob to ON position
2. Set thermostat selector switch at HEAT position and set thermostat dial a few degrees above room temperature.
3. Turn power on.

AUTOMATIC SEQUENCE

1. Pilot valve opens, spark ignition and indoor fan time delay relay energize.
2. Gas flows to pilot and ignites Pilot flame sensing probe permits energizing of the main gas valve. Gas flows to main burner and ignites
3. Time delay relay starts indoor fan motor in 30 – 45 seconds.
4. When thermostat setting is satisfied, main gas valve and pilot gas valve close and flames are extinguished
5. Indoor fan motor stops in 1- to 1-1/2 minutes

CAUTION: Do not use matches to light pilot on intermittent pilot units due to possible electrical shock hazard.

GENERAL OPERATING SEQUENCES

These sequences apply to both natural and LP gas units in normal operation after initial start-up

Operating Sequence-Heating

NATURAL GAS AND LP UNITS WITH INTERMITTENT PILOT

- 1 Thermostat selector switch at HEAT or AUTO. Thermostat dial set above room temperature.
- 2 Pilot gas valve opens. Gas flows to pilot and ignites. Pilot flame setting probe causes main gas valve to open. Gas flows to main burner and ignites.
- 3 TDR starts indoor fan motor in 30 – 45 seconds
- 4 When thermostat is satisfied both pilot gas and main gas valves close. Pilot and main burner flames are extinguished.

- 5 TDR stops indoor fan motor in 1- to 1-1/2 minutes.

- 6 Pilot is on only when thermostat calls for heating

Operating Sequence – Cooling

- 1 Unit energized. Thermostat selector switch at COOL or AUTO. Thermostat dial set below room temperature
- 2 Indoor and outdoor fans and compressor start
3. When thermostat setting is satisfied, fans and compressor stop.

Automatic Operation – Power and gas on. Room thermostat (control center) set at AUTO. Fan switch (on control center) set at AUTO.

Unit performs as described in the operating sequences above on call for heating or cooling. Automatic changeover type thermostat is required

Continuous Fan Operation – With power supplied to unit and fan switch at ON position, indoor fan remains on at all times.

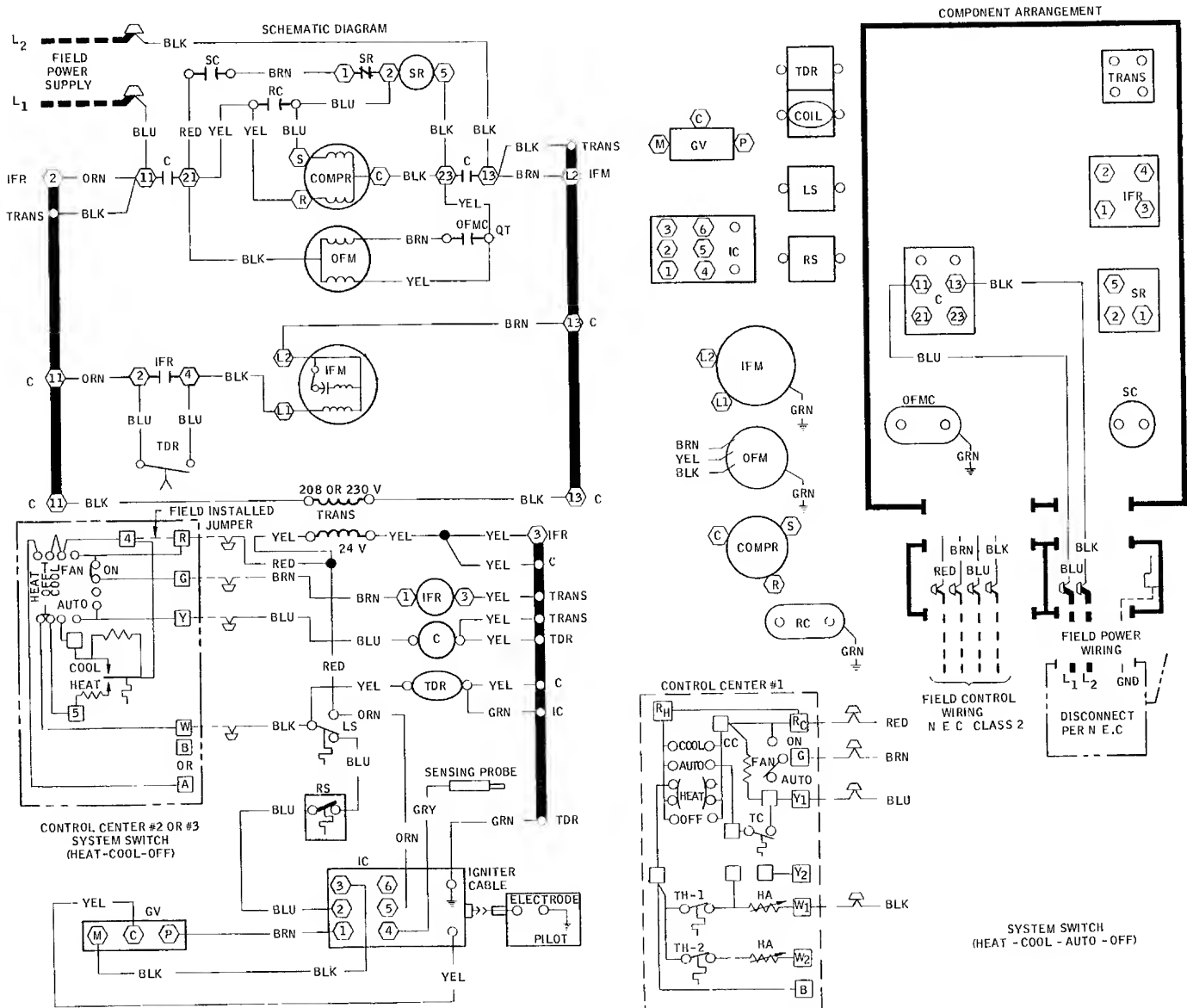


Fig. 1 – Label Diagram, 48DL,DM006; 230-1-60

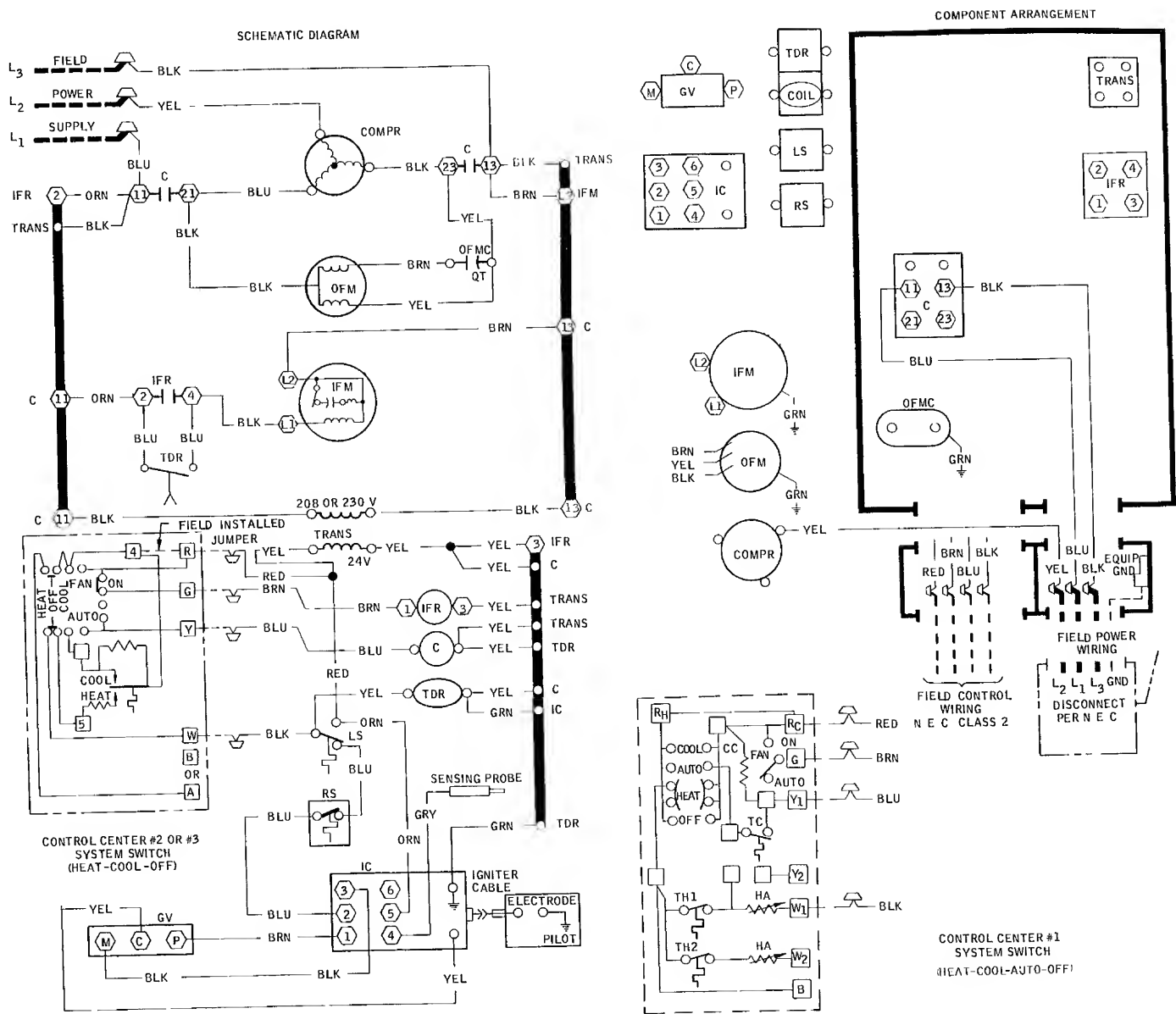


Fig. 2 — Label Diagram, 48DL,DM006; 208/230-3-60

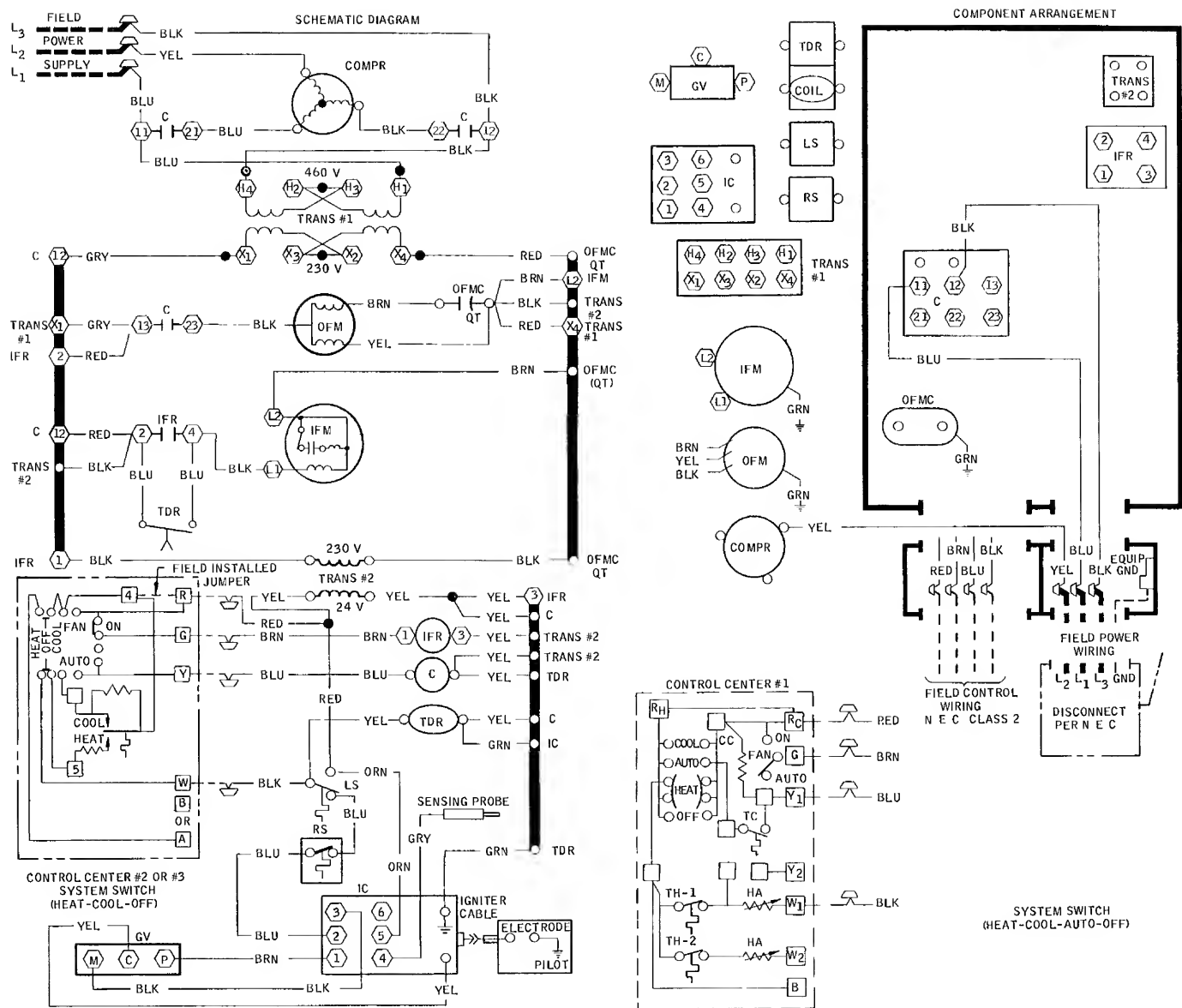


Fig. 3 — Label Diagram, 48DL,DM006; 460-3-60

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations

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Form 48DL-1W New

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